

An Evaluation of Bilateral Breast Carcinoma

Simultaneous and Sequential Lesions

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The detection of bilateral breast carcinoma, simultaneous or nonsimultaneous, appears to be increasing. Undoubtedly a major factor in this is the increased use of mammography and xeromammography. In a 21-year period at Saint John's Hospital and Health Center, 1,189 cases of primary breast carcinoma were treated, of which 34 (2.9 percent) were bilateral. However, from 1972 to 1974 the incidence has risen from 1.9 to 10.8 percent, with a simultaneous rise in numbers of xeromammograms made. Xeromammography should be done routinely in patients in whom carcinoma of the breast is suspected. Its use should also be an integral part of the follow-up in patients in whom mastectomy has been carried out previously.

WHETHER THE INCREASE in overall incidence is only apparent or is real, the finding of bilateral breast carcinoma in private practice is increasing. This may be due to the increased use of mammography and xeromammography. Management of the remaining breast in patients already successfully treated for breast cancer is most important in the follow-up care. The overall risk for development of a new primary malignant lesion in the opposite breast can be five times greater than in the general female population.¹ It has been stated that the longer the interval between mastectomies, the better the prognosis.²

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However, the diagnosis of bilateral simultaneous breast carcinoma, when the second primary lesion is nonpalpable (or occult), can result in a good prognosis. Early noninfiltrating cancer in the opposite breast can be detected by contralateral biopsy, as is done by Urban at the time of the initial mastectomy. An alternative to routine contralateral biopsy may be the use of xeromammography. Although routine contralateral biopsy may be lifesaving in detecting unsuspected carcinoma in the opposite breast, it is seldom practiced as it may be nonproductive in 83 to 86 percent of cases.³ Therefore, the alternative of routine preoperative xeromammography is attractive.

Xeromammography has been reported as improving diagnostic accuracy when compared with conventional mammography because it produces an image of the breast in finer detail, giving great

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TABLE 1.—Incidence of Bilateral Breast Carcinoma in Patients Treated for Primary Breast Carcinoma

Source	Bilateral/Primary	Percent
Literature generally		1 - 14.0
Herrmann	31/418	7.4
Urban	70/488	14.3
Urban*	67/337	20.0
Spratt	14/704	2.0
Saint John's Hospital	34/1189	2.9

*Selected series-bilateral biopsy.

TABLE 2.—Incidence of Bilateral Breast Carcinoma in Patients Treated for Primary Breast Carcinoma at Saint John's Hospital, 1950 Through 1974

	Bilateral/Primary	Percent
1950-1968	18/916	2.0
1972*	2/106	1.9
1973	9/117	7.7
1974	8/74	10.8

*Xeromammography instituted October 1972.

TABLE 3.—Incidence of Bilateral Breast Carcinoma and Use of Xeromammography at Saint John's Hospital

Year	No. Studies	Incidence (Percent)
1972	120	1.9
1973	698	7.7
1974	1,053	10.8

promise as a method for the earlier diagnosis of breast cancer. In a 17-month program involving 4,183 xeromammographic studies, 133 malignant breast lesions were diagnosed and proven by biopsy findings. Fifty-two (or 39 percent) of these 133 were clinically unsuspected (nonpalpable). Of the 52 cases of occult cancer, malignancy had spread to the axillary lymph nodes in 22 percent. The other 81 palpable masses (cancer) had spread to the axillary lymph nodes in 51 percent of the patients.⁴ Therefore, the use of xeromammography is an important tool to confirm a clinical impression of possible primary breast cancer in one or both breasts (simultaneous lesions) and to detect occult breast cancer, particularly in high risk categories.

Incidence of Bilateral Breast Carcinoma

The incidence of bilateral breast cancer has been expressed as ranging from approximately 1 to 14 percent or more in selected series. Table 1 shows an incidence of approximately 2.9 percent (34/1189) at Saint John's Hospital and Health Center in a 21 year period. This is comparable to rates of incidence found in other series that ended five years ago or more, indicating that mammography was apparently not a factor.⁵ Close

follow-up of personal cases by Herrmann resulted in a bilaterality incidence of 7.4 percent (31/418).² Urban's series with a higher bilaterality of 14.3 percent (70/488) seems dependent on careful follow-up in addition to contralateral random biopsy studies. In a selected group of patients in whom surgical operation was carried out at Memorial Hospital in New York—and in whom previous mastectomy or contralateral simultaneous biopsy had been done—there was a bilateral incidence of approximately 20 percent (67/337). In only 24 patients in Urban's series was conventional mammography carried out and the results were not particularly helpful in the detection of occult lesions.³

In more recent years with revival of standard or conventional mammography, the incidence of bilaterality noted at Saint John's Hospital (Table 2) in 1972 was still 1.9 percent (2/106). With the apparent increased use of xeromammography (instituted at this hospital in October of 1972), the 1973 incidence of bilateral carcinoma of the breast was 7.7 percent (9/117). With a lesser number of cases in 1974, an increased incidence of bilaterality (10.8 percent) has been noted.

Use of Mammography or Xeromammography as a Diagnostic Aid

The use of mammogram studies has doubled from an average of 44 cases per month before 1973 to an average of approximately 88 cases per month or a total of 1,053 in 1974 (Table 3). In the nine bilateral cases detected in 1973, xeromammography was used in five. Three of these cases were simultaneous—the second lesion was nonpalpable or occult in two of these. In four other patients—all with palpable breast masses—mammography was not done (mastectomy had been carried out previously in three cases and one was a case of simultaneous, bilateral masses). Of the eight instances of bilateral breast carcinoma detected in 1974, three were simultaneous bilateral lesions (two being unsuspected or occult).*

In one author's (CAK) personal series, the diagnosis of a nonpalpable or occult second lesion was made by mammography in every one of the most recent four consecutive cases. All of these four patients are alive 2 to 7½ years after a second mastectomy was carried out. In the one patient who died in this series, periodic mammography had not been done from the time of the

*Mammography statistics from the Department of Radiology at Saint John's Hospital and Health Center supplied courtesy of Conrad Frydenlund, MD.

initial mastectomy in 1957 to the time the patient returned in 1965 with a palpable mass in the remaining breast. She died 12 years after the first mastectomy was done and four years after the second mastectomy. In this patient no positive nodes were found at the time of either standard radical mastectomy. These observations and the increased incidence of bilateral breast carcinoma cases being detected in 1973 and 1974 would suggest the value of routine periodic xeromammography.

Treatment of Bilateral Breast Carcinoma

In Herrmann's personal series of 31 patients with bilateral breast carcinoma, bilateral radical mastectomies were done in all cases. In 28 of these 31 patients, carcinoma was nonsimultaneous, or asynchronous, and in only three was it simultaneous. A retrospective study of a so-called high risk group among his 418 patients failed to show the value of prophylactic removal of the remaining breast after mastectomy.² This finding is in agreement with the general and current consensus of other authors in regard to contralateral prophylactic mastectomy.

Urban has used radical mastectomy or extended radical mastectomy in patients with infiltrating carcinoma of the breast. In cases of noninfiltrating carcinoma he carries out radical mastectomy or modified radical mastectomy. He further states that since 1964 he routinely does random biopsy of the opposite breast. This consists of a generous biopsy of the upper outer quadrant as well as the mirror image area of the malignant lesion. He notes, "Approximately 20 percent of the breast parenchyma is removed in order to afford the pathologist an adequate specimen."³ This was done in 73 percent of the available opposite breasts at the time of the initial mastectomy. It is usually not done in patients with advanced disease and poor prognosis or in elderly patients with poor survival expectancy.

In the authors' combined series of nine patients, 11 standard radical and 5 modified radical mastectomies were carried out. In one patient—an 8¼-year survivor—extended radical mastectomy had been done on the first side with findings of positive midaxillary nodes and negative internal mammary nodes. An occult lesion on the opposite side was treated by modified radical mastectomy four years later. There were no positive axillary nodes noted on this side and the

patient is apparently free of disease. In another patient one breast lesion was treated with simple mastectomy (in a five-year survivor living with disease). Within the past year one other patient with bilateral simultaneous primary breast carcinoma was treated with bilateral incontinuity modified radical mastectomies.

Five-Year Survival Rates in Bilateral Breast Carcinoma

When carcinoma is detected simultaneously in both breasts, it does not denote a hopeless situation. There was a 75 percent (9/12) five-year survival rate (free of disease) in Urban's series of patients with simultaneous breast carcinoma. It is also of interest to note that in Herrmann's personal series there was a five-year survival rate (free of disease) of 57.9 percent (11/19) in bilateral breast carcinoma in contrast to an overall survival rate of his total series of 52.6 percent (220/418). Therefore, a careful follow-up with early diagnosis of the contralateral lesion appears at present to improve the survival rate in patients with bilateral breast carcinoma over that in patients with unilateral primary carcinoma.

In the authors' combined series, followed from one to eight years after the second mastectomy, the gross survival rate was 77.7 percent (7/9). Two of the survivors are living with disease, eight and five years after initial mastectomy. The age range of patients was from 41 to 73 years at the time bilateral breast carcinoma was diagnosed. One of the survivors living with disease is totally asymptomatic now, 8½ years and 6 years after mastectomies were done. In this same patient bilateral oophorectomy was done 5.8 years ago and bilateral adrenalectomy 3.7 years ago. Metastatic breast carcinoma was noted in both ovaries and adrenals. Findings on liver scan, carried out at six-month intervals, have changed from appearing to show several focal defects to "normal." The second patient living with disease is asymptomatic five years after mastectomies, now 3.5 years after bilateral oophorectomy and 3 years after bilateral adrenalectomy.

In comparing the above survival rates with the range of reported five-year survival rates for operable unilateral primary breast carcinoma, it would appear that the survival rate in properly treated bilateral breast carcinoma can be equal to or superior to that usually obtained with unilateral disease. This may be due to closer fol-

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low-up and earlier diagnosis of the second lesion as previously stated. "Aggressive primary therapy is indicated when primary operable breast cancer is found simultaneously in both breasts."³

Conclusions

In our experience use of preoperative and periodic mammography has been helpful in detecting unsuspected occult carcinoma of the breast. Current xeromammography experience at Saint John's Hospital shows increased detection of bilateral breast carcinoma.

A sizable recent xeromammography series in the literature showed a 39 percent incidence of unsuspected or occult breast carcinoma. With the occult lesions there was a proven 22 percent axillary lymph node involvement. This would suggest that such occult lesions should be treated by at least a modified radical mastectomy of the second

breast for potential cure, whether simultaneous or nonsimultaneous bilateral breast carcinoma.

Survival rates for bilateral breast carcinoma treated by standard radical or modified radical mastectomy appear to be equal to or superior to that usually obtained in unilateral disease. Present survival rates should improve, even in selected series, because of earlier detection of occult lesions with routine preoperative and periodic xeromammography.

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Unexplained Fever Following Intestinal Surgery

Certainly with temperature elevation (that is, temperature elevation beyond the first 48 hours), I think it is worthwhile to start a systematic investigation of the sources of fever. And for a patient who has had a wound, the wound is the first thing to consider as a cause for any temperature elevation. I have seen certain clostridial infections involving abdominal incision that caused fever the night following the operation. So, while we usually think of a wound infection as giving rise to temperature elevations about the third or fourth day, never dismiss the wound as the principle or perhaps prime source of a temperature elevation—even as soon as the night following operation. The point about patients with those clostridial infections is that they run their temperatures from that source early in the course of infection; and, especially concerning a clostridial wound infection, the sooner you make that diagnosis, the better your chances of successfully dealing with an otherwise highly lethal complication.

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